T06T2T'65E7200T

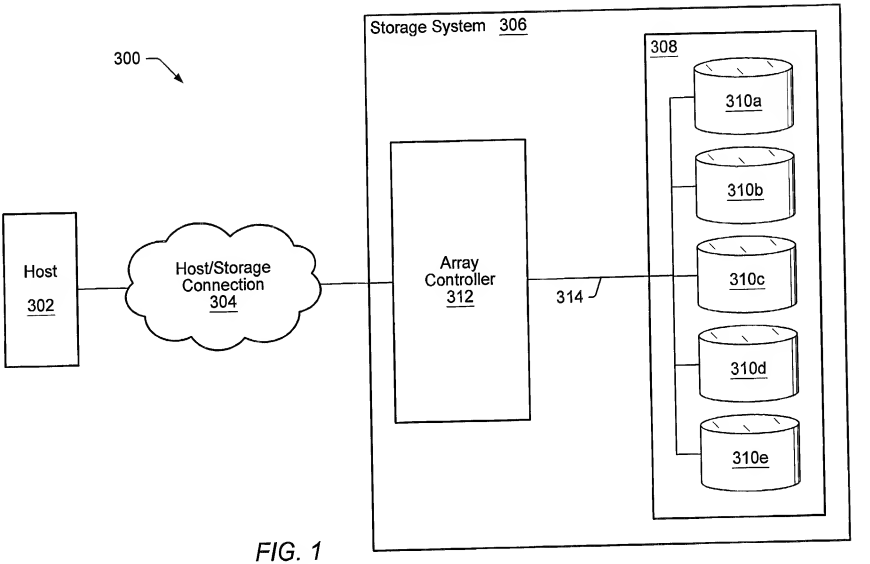

FIG. 1

US20230273859A1

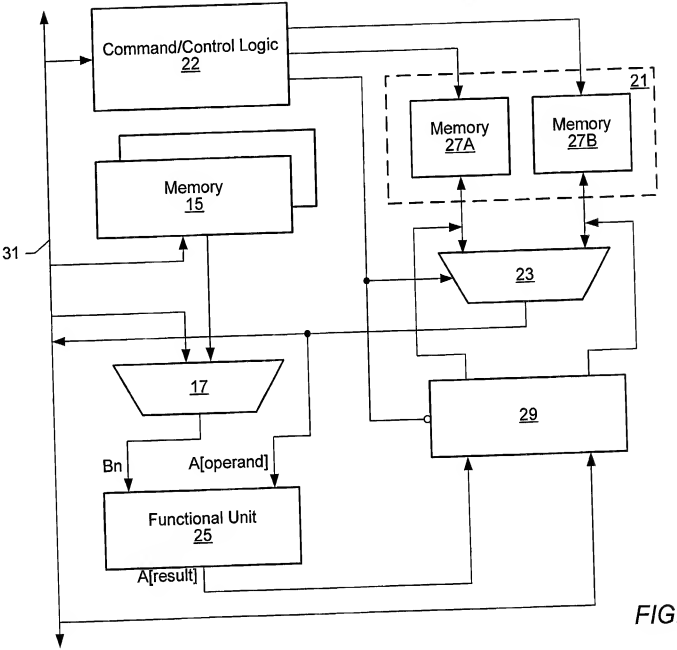

FIG. 2

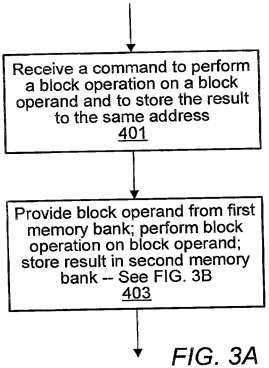

FIG. 3A

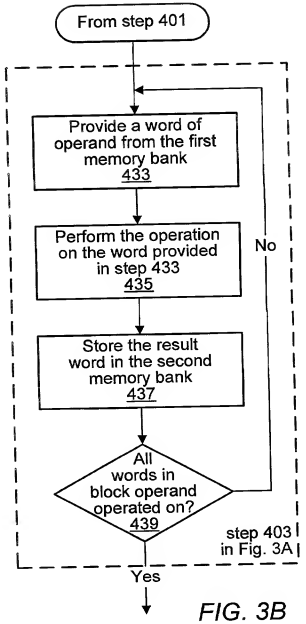

FIG. 3B

1002739-121901

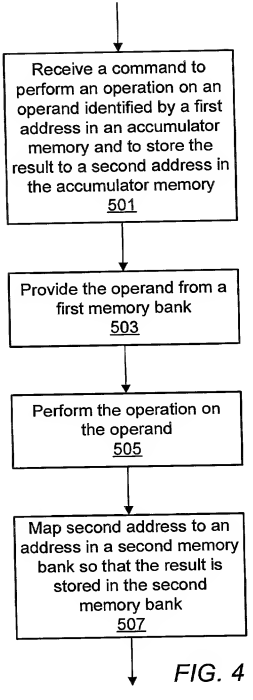

FIG. 4

1002127-052412001

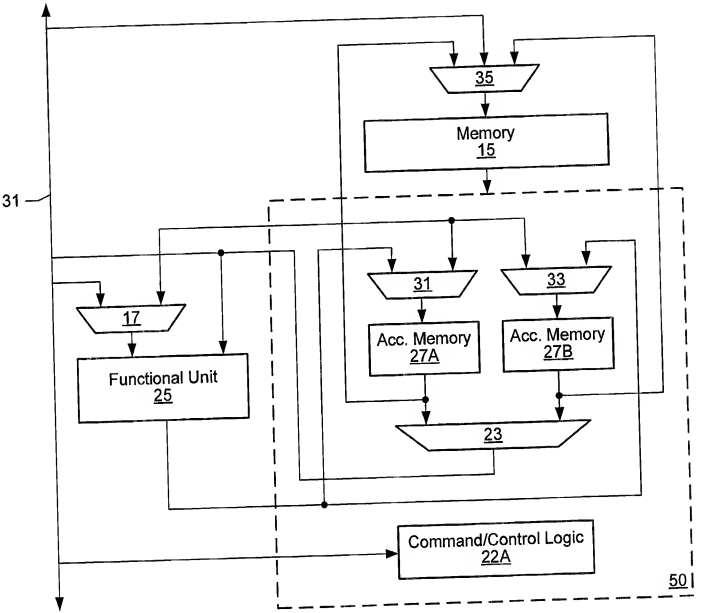
35
Memory
15
31
17
Functional Unit
25
31
33
Acc. Memory
27A
Acc. Memory
27B
23
Command/Control Logic
22A
50

FIG. 5

Instructions	Acc. Memory 27A	Acc. Memory 27B	Memory 15
B = B0	B(new)	n/a	B0
B = B XOR B1	B(old)	B(new)	B1
B = B XOR B2	B(new)	B(old)	B2
B = B XOR B3	B(old)	B(new)	B3
B = B XOR B4	B(new)	B(old)	B4
flush cache	n/a	n/a	B

FIG. 6

Instructions	Acc. Memory 27A	Acc. Memory 27B	Memory 15
B = immed(B0)	B(new)	n/a	n/a
B = B XOR immed(B1)	B(old)	B(new)	n/a
B = B XOR immed(B2)	B(new)	B(old)	n/a
B = B XOR immed(B3)	B(old)	B(new)	n/a
B = B XOR immed(B4)	B(new)	B(old)	n/a
flush cache	n/a	n/a	B

FIG. 7

Accumulation Operations:

B = B0 XOR B1 XOR B2 XOR B3 XOR B4
C = C0 XOR C1 XOR C2 XOR C3 XOR C4
D = D0 XOR D1 XOR D2 XOR D3 XOR D4

Instructions:

(1) B = B0
(2) B = B XOR B1
(3) B = B XOR B2
(4) C = C0
(5) C = C XOR C1
(6) C = C XOR C2
(7) B = B XOR B3
(8) D = D0
(9) D = D XOR D1
(10) D = D XOR D2
(11) C = C XOR C3
(12) D = D XOR D3
(13) B = B XOR B4
(14) C = C XOR C4
(15) D = D XOR D4

FIG. 8A

1002359.1210101

Row#	Instructions/Operations	Acc. Memory 27A	Acc. Memory 27B	Memory 15
1	(1) B = B0	B(new)	n/a	B0
2	(2) B = B XOR B1	B(old)	B(new)	B1
3	(3) B = B XOR B2	B(new)	B(old)	B2
4	(4) C = C0	C(new)	n/a	C0
5	(5) C = C XOR C1	C(old)	C(new)	C1
6	(6) C = C XOR C2	C(new)	C(old)	C2
7	(7) B = B XOR B3	B(old)	B(new)	B3
8	(8) D = D0	n/a	n/a	n/a
9	(8) flush C	C	n/a	C
10	(8) load D	D(new)	n/a	D0
11	(9) D = D XOR D1	D(old)	D(new)	D1
12	(10) D = D XOR D2	D(new)	D(old)	D2
13	(11) C = C XOR C3	n/a	n/a	n/a
14	(11) flush B	n/a	B	B
15	(11) load C	n/a	C(new)	C
16	(11 completes)	C(new)	C(old)	C3
17	(12) D = D XOR D3	D(old)	D(new)	D3
18	(13) B = B XOR B4	n/a	n/a	n/a
19	(13) flush C	C	n/a	C
20	(13) load B	B(new)	n/a	B
21	(13 completes)	B(old)	B(new)	B4
22	flush B	n/a	B	B
23	(14) C = C XOR C4	n/a	n/a	n/a
24	(14) load C	n/a	C(new)	C
25	(14 completes)	C(new)	C(old)	C4
26	flush C	C	n/a	C
27	(15) D = D XOR D4	D(new)	D(old)	D4
28	flush cache	D	n/a	D

FIG. 8B

1002735-121901

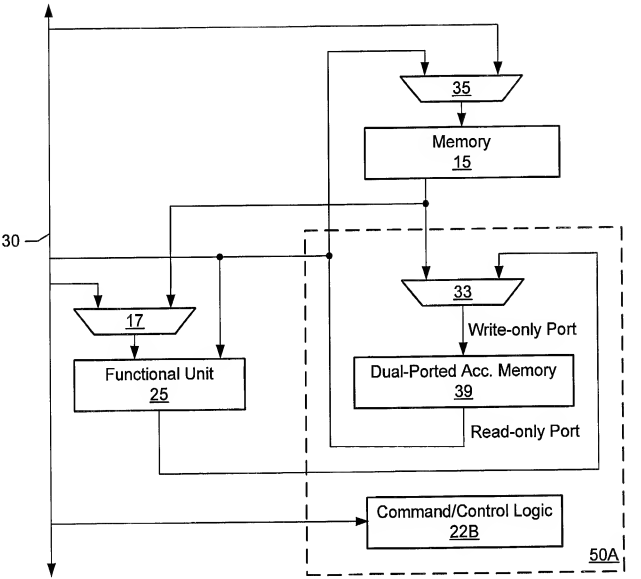
35
Memory
15
30
33
Write-only Port
17
Functional Unit
25
Dual-Ported Acc. Memory
39
Read-only Port
Command/Control Logic
22B
50A

FIG. 9

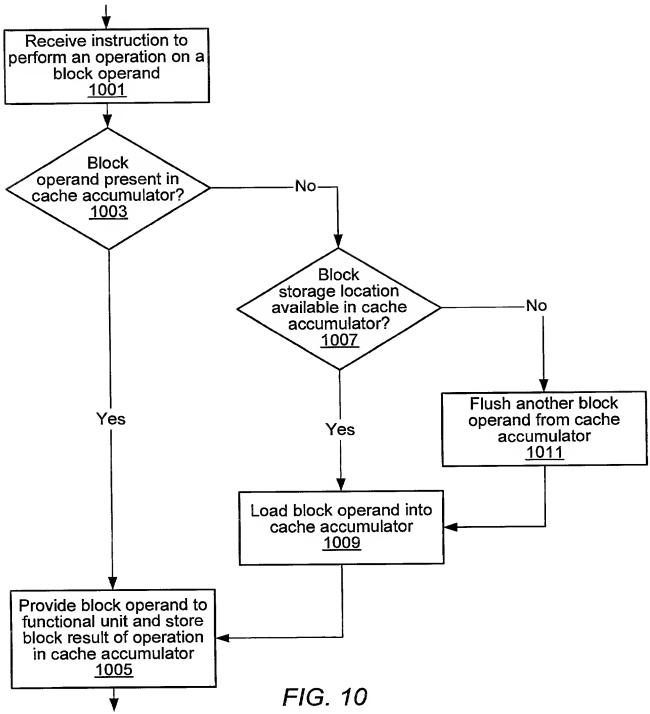

FIG. 10

1002736-121901

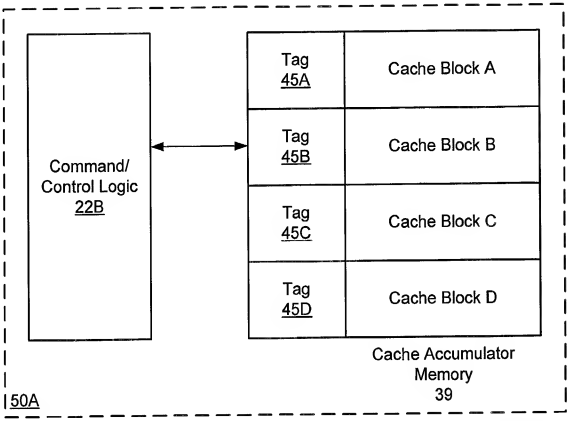

FIG. 11A

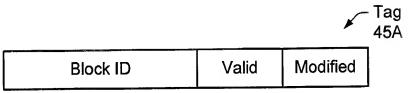

FIG. 11B

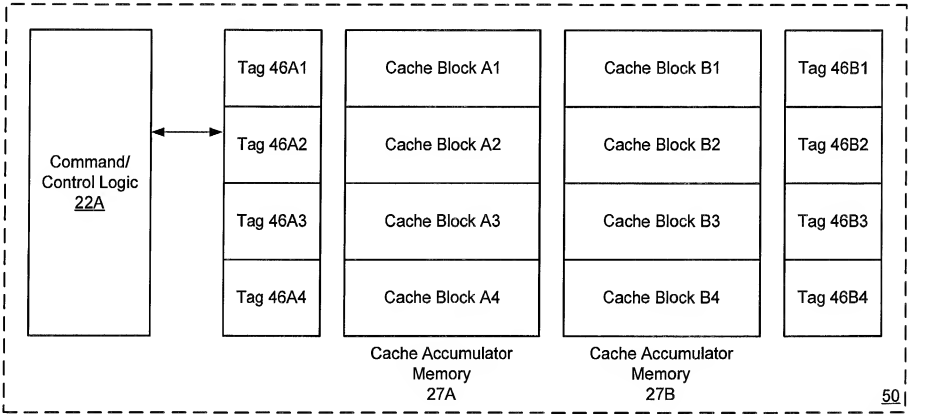

FIG. 12A

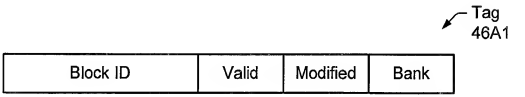

FIG. 12B

Accumulation Operation:
D = A XOR B XOR C

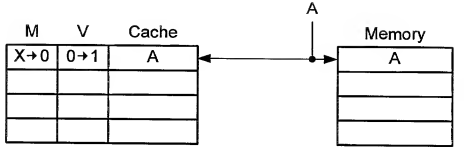

FIG. 13A

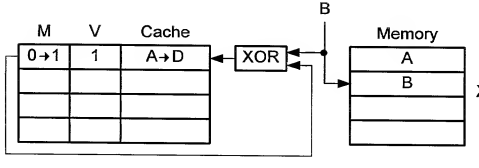

FIG. 13B

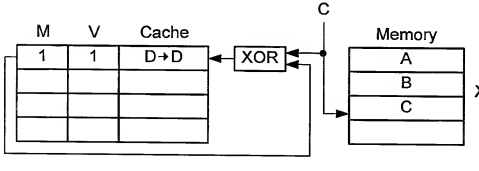

FIG. 13C

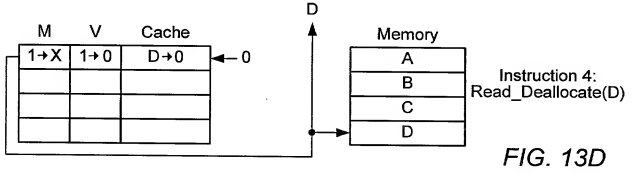

FIG. 13D

10027359-121901

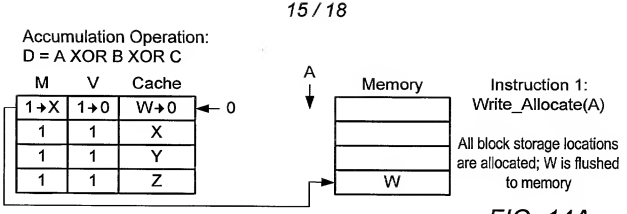

FIG. 14A

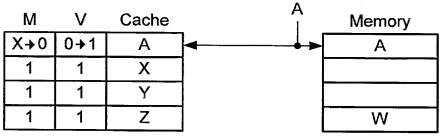

FIG. 14B

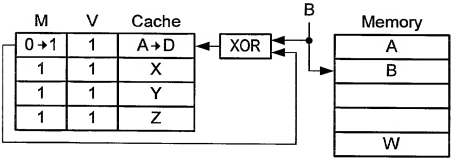

FIG. 14C

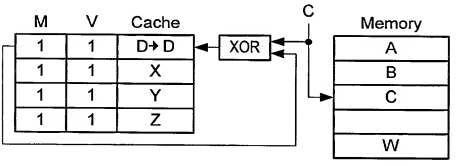

FIG. 14D

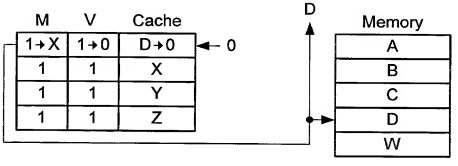

FIG. 14E

10002/13519.121901

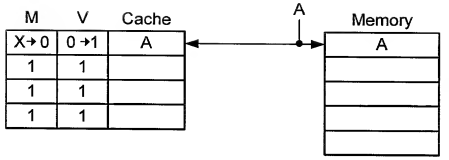

FIG. 15A

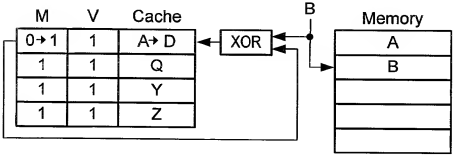

FIG. 15B

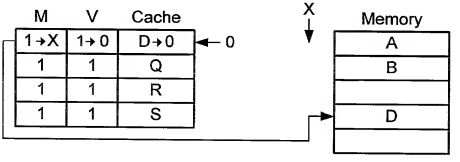

FIG. 15C

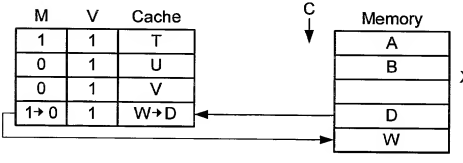

FIG. 15D

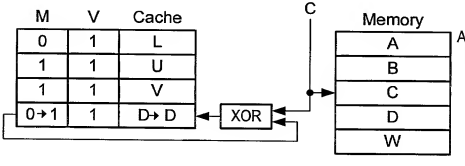

FIG. 15E

10121-559-12901

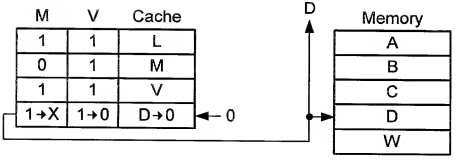

FIG. 15F

Accumulation Operation:
D = A XOR B XOR C

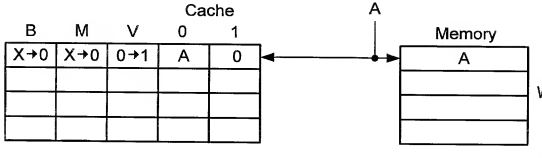

FIG. 16A

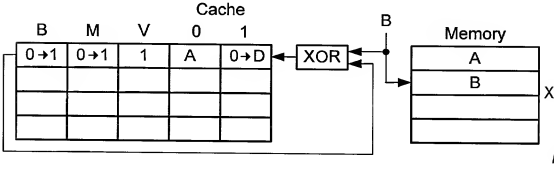

FIG. 16B

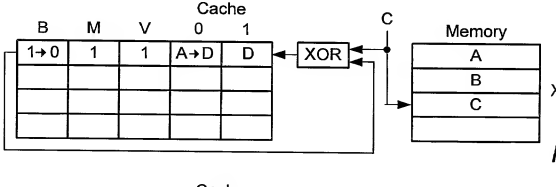

FIG. 16C

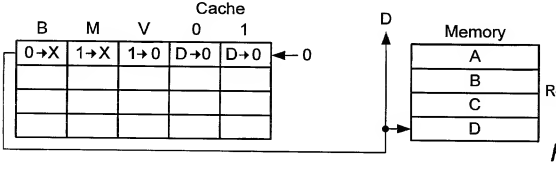

FIG. 16D

10571-659.2001

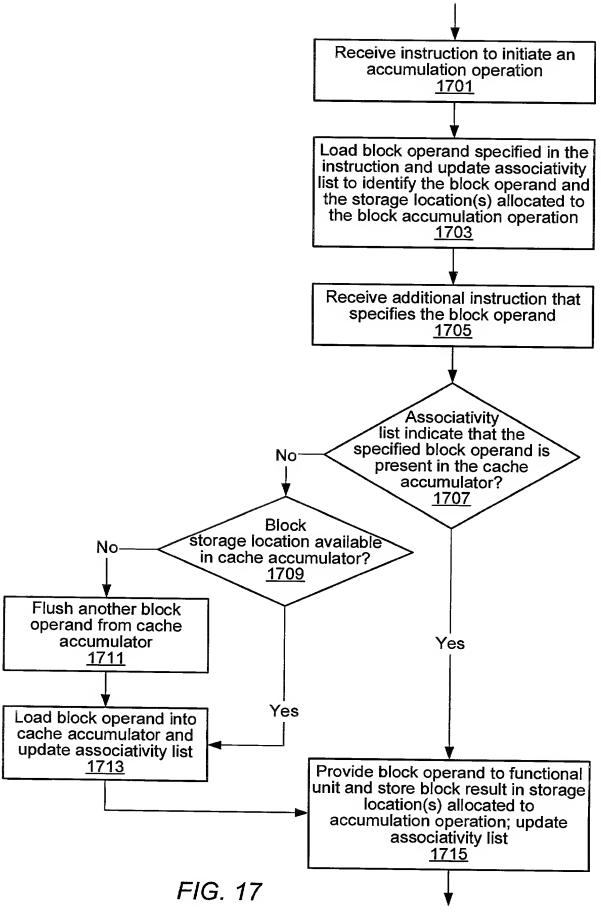

FIG. 17

10621-652/2001